

REMARKS

Reconsideration and allowance of the above-referenced application are respectfully requested. Claims 1-19 are pending in the application.

Examiner Interview

During a telephonic interview between the Examiner and Leon R. Turkevich on July 31, 2006, the Examiner indicated that prior rejection was, in fact, withdrawn

Claim 1

Claim 1 stands rejected under 35 U.S.C. § 103(a) over U.S. Patent No. 3,818,458 to Deese in view of ATLAS I: Implementing a Single-Chip ATM Switch with Backpressure, IEEE 1999 to Kornaros. This rejection is respectfully traversed.

Independent claim 1 recites as follows:

1. A method comprising:
receiving a data frame by an integrated network switch; and
prioritizing switching of the data frame by the integrated network switch to an output port ***according to a user-defined policy*** and based on ***a user-selected attribute of the data frame***.

As described in the specification, “[t]he user-defined policy specifies the manner in which the data frame is to be switched by the integrated network switch, for example if the data frame needs to be switched according to a guaranteed minimum latency, a guaranteed quality of service, a minimum bandwidth, etc.” (page 3, lines 6-9); hence, “[t]he switching policy may specify a priority class, or a guaranteed quality of service (e.g., a guaranteed bandwidth), ensuring that the received layer 2 type data frame receives the appropriate switching support” (page 2, lines 31-33).

Moreover, the claims specify prioritizing the switching *also* based on “a user selected attribute of the data frame”: as described in the specification, “the switch fabric 25 is *also configured for implementation of user-defined switching policies based on detection of the user-selected attributes within the Ethernet packet*, described in detail below” (page 4, lines 27-29).

Hence, a user is able to select prioritization of data frames based on user-selected

attributes *within* the Ethernet packet (e.g., that identifies a prescribed data flow). These and other features are neither disclosed nor suggested in the applied prior art.

Applicant traverses the assertion in the rejection that Deese discloses prioritizing switching of a data frame to an output port based on a user-selected attribute of the data frame. In fact, Deese provides no disclosure or suggestion of switching according to a user-defined policy *and* a user-selected attribute of a data frame. Rather, Deese describes a monitoring system 40 configured for monitoring state variable changes within a general-purpose digital computer 10. The monitoring system 40 includes collection registers 44 for collecting data, and a data buffer 46 for forwarding the collected data to a data processor 52.

However, Deese describes no more than a buffer 46 (Fig. 1) having a priority sampler 302 (Fig. 4) that *transfers* inputs T (from 16-bit line 300), A (from 13-bit line 160), B (from 12-bit line 222), and C (from 16-bit line 292) to an output buffer 46:

The priority sampler 302 responds to the identification signals on lines 158, 220 and 290 to *transfer or dump* the signals received at input ports A, B, C, and T via a 16-bit interconnecting line 320 to the data buffer 46.

(Col. 9, lines 4-7)

Hence, the values from register A, register B and register C are “dumped” (i.e., transferred) into data buffer 46 via 16-bit interconnect line 320: the sampler 302 does not perform any “switching”, as claimed. Hence, the reliance in the rejection on col. 4, lines 40-41 reciting “priority switching or sampling circuitry” is ill-founded, because it disregards the explicit teachings of that circuitry in Fig. 4 and as described above.¹

Moreover, Deese does not disclose or suggest switching according to a user-selected attribute *of the data frame*, rather Deese teaches no more than transferring data from registers according to a preselected priority scheme:

The priority sampler 302 is designed to feed the buffer in accordance with a suitable, preselected priority scheme such that **only one 16-bit word from only**

¹“A prior art reference must be considered in its entirety, i.e., as a whole, including portions that would lead away from the claimed invention. MPEP §2141.02, page 2100-132 (Rev. 3, Aug. 2005) (*citing W.L. Gore & Assoc. v. Garlock, Inc.*, 220 USPQ 303 (Fed. Cir. 1983), *cert. denied*, 469 U.S. 851 (1984))(emphasis in original).

one of the registers is fed to the data buffer 46 at a time. For example, the sampler may pass the contents of timing register 298 and then the contents of those data collection registers associated with the state change which occurred at that instant of time, **and continually repeat the above sequence as long as data is received from the host system.**

(Col. 9, lines 25-35).

Hence, even assuming that the “preselected priority scheme” for transferring data from different registers disclosed in Deese is considered a teaching of the claimed “user-defined policy”, the preselected priority scheme continually repeats regardless of any attribute of the received data! Hence, Deese fails to disclose or suggest prioritizing switching of the data frame ***based on a user-selected attribute of the data frame.***

In fact, the “preselected priority scheme” cannot even be considered a teaching of the claimed “user-defined policy”, because the “preselected priority scheme” is fixed in hardware and cannot be changed: there is no disclosure or suggestion of a *user* being able to define the “policy”. As described on page 5, lines 33-34 and page 6, lines 11-12 of the specification, “priority register 60 enables the user of the host CPU 26 to set a user-defined switching policy” and “the switching module 62 may be programmed by the host CPU 26 to implement user-defined switching policies”. Deese provides no disclosure or suggestion that a user of the disclosed monitoring system 40 may define a switching policy, as claimed.

Further, the information collected from the host computer 10 and stored in the registers A, B, and C 44 are not data frames, as claimed, but execution parameters from the host computer 10: for example, the register A stores a 4-bit channel status word protect key from the host computer (col. 6, lines 9-12), and a 4-bit binary program status word protect key from a program status word register of the host computer 10 (col. 6, lines 36-39); Register B stores data detected at an initiation of an I/O command, and Register C stores data detected at an initiation of an I/O interrupt (col. 7, line 64 to col. 8, line 2). Hence, the retrieved information from the host computer are not data frames, as claimed.

Deese is not analogous art: Deese is directed to a method and apparatus for monitoring a digital computer system (such as an IBM 360 mainframe, col. 1, lines 5-10

and col. 4, lines 10-14), and is not within the field of the inventors' endeavor, namely "switching of data packets in a non-blocking network switch configured for switching data packets between subnetworks" (page 1, lines 2-3);² further, Deese not reasonably pertinent to the particular problem with which the inventors were involved, namely prioritizing switching of a data frame based on criteria other than the presence of explicit priority information in a packet (see, e.g., page 2, lines 3-24 of the specification); rather, Deese is concerned with efficient monitoring of a computer system (e.g., col. 1, line 64 to col 2, line 59; col. 4, lines 52-62).³ Deese provides no disclosure or suggestion of using prioritized switching of a data frame received from a network node, and as such is non-analogous art. *In re Wood*, 202 USPQ 171, 174 (CCPA 1979).

The Federal Circuit has admonished the PTO that "it is necessary to consider 'the reality of the circumstances' – in other words, *common sense* – in deciding in which fields a person of ordinary skill would *reasonably* be expected to look for a solution to the problem facing the inventor." *In re Oetiker*, 24 USPQ2d 1443, 1445-46 (Fed. Cir. 1992). (emphasis added, citations omitted) (holding PTO failed to demonstrate person of ordinary skill would reasonably have been motivated to look to fasteners for garments to solve problem of fastening a hose clamp). The rejection fails establish any reason why one skilled in the art would have been motivated to use Deese in attempting to solve the

²*In re Bigio*, 72 USPQ2d 1209, 1211-1213 (Fed. Cir. 2004) ("the field of endeavor test ... for analogous art requires the PTO to determine the appropriate field of endeavor by reference to explanations of the invention's subject matter in the patent application, including the embodiments, function, and structure of the claimed invention. See [*In re*] *Wood*, 599 F.2d at 1036[, 202 USPQ at 174] (confining the field of endeavor to the scope explicitly specified in the background of the invention)"; "the PTO must show adequate support for its findings on the scope of the field of endeavor in the application's written description and claims, including the structure and function of the invention.")

³A reference is reasonably pertinent if, even though it may be in a different field from that of the inventor's endeavor, it is one which, because of the matter with which it deals, ***logically would have commended itself to an inventor's attention in considering his problem***. Thus, the purposes of both the invention and the prior art are important in determining whether the reference is reasonably pertinent to the problem the invention attempts to solve. *In re Clay*, 23 USPQ2d 1058, 1061 (Fed. Cir. 1992) (*cited by In re Bigio*, 72 USPQ2d at 1212).

problems confronted by the inventors.

For these and other reasons, the rejection fails to establish a prima facie case of obviousness, and therefore should be withdrawn.

The indication of allowable subject matter in claims 2-11 is acknowledged with appreciation: it is believed these claims are allowable in view of the foregoing. The allowance of claims 12-17 is acknowledged with appreciation.

In view of the above, it is believed this application is in condition for allowance, and such a Notice is respectfully solicited.

To the extent necessary, Applicant petitions for an extension of time under 37 C.F.R. 1.136. Please charge any shortage in fees due in connection with the filing of this paper, including any missing or insufficient fees under 37 C.F.R. 1.17(a), to Deposit Account No. 50-0687, under Order No. 95-311, and please credit any excess fees to such deposit account.

Respectfully submitted,

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